

REMARKS

The Office examined claims 1-12 and rejected claims 1-10. This paper changes claims 1-12 in ways believed to be purely matters of form, and adds new claims 13-22. Claims 1-22 are pending.

Changes to the claims

With this paper claims 1-2, 4-12 are amended in ways believed related to only to matters of form. In particular "characterized by/in that" is replaced with "comprising/wherein." Applicant respectfully submits that this amendment does not affect the scope of the claims. See MPEP § 2111.03 (the transitional term "comprising" is synonymous with "characterized by"). Also, reference numerals are removed from the claims, which does not affect the scope of the claims. See MPEP § 608.01(m) (the use of reference characters is considered as having no effect on the scope of the claims). Further, the method claims are amended so as not to recite "step of." Finally, all acronyms are eliminated.

Claim Rejections under 35 USC §103

At paragraph 5 of the Office action, claims 1-10 are rejected under 35 USC §103(a) as being unpatentable over Suumäki *et al.* (US 6,590,905). Of the claims examined, the only independent claims are 1, 5, 8 and 9.

Claims 1 and 5

Claims 1 and 5 recite a user equipment device, in response to an indication from a network of a change from an old service access point identifier (connection) to a new service access point identifier, setting a timer for a period of time, and then (either when the timer expires or before) terminating the old service access point identifier.

Suumäki teaches about how to determine when renegotiated XID parameters of a given connection (e.g. encryption parameters) are to take effect, whereas the invention is directed to determining when to use a new SAPI connection. These are different and distinct. XID negotiation/ renegotiation for communication via a SAPI connection is carried out over the SAPI connection. The invention provides how to change to a new SAPI connection while a communication over an old SAPI connection is in progress with little or no disruption. XID negotiation must be conducted and completed over the new SAPI before the change from the old SAPI to the new SAPI is made. But without the invention, it is possible for wireless terminals (user side and network side) operative according to standards (in place at the time of the present application) to fail to complete XID negotiation in case of a change to a new SAPI. As explained in the application in the paragraph beginning at page 6, line 28:

3GPP LLC specification 04.64 says that LLC messages received on a SAPI not mapped to a PDP context can be discarded. However, SNDC specification (04.65) says that after a context modification procedure, the network should in certain cases start XID (context identifier) negotiation and/or a logical link disconnection procedure using the old SAPI. This causes a conflicting situation, i.e. the network sends LLC messages that the mobile side is allowed to discard. Depending on the network implementation, this can cause a long break in the data transfer or even PDP context deactivation.

In Suumäki, there is only one SAPI connection, and what is disclosed is how to decide on when to use new XID/PDCP parameters for the SAPI connection. In the invention, there are two SAPI connections, and old one, i.e. the SAPI in use when the UE receives an indication of a change to a new one, and the new one, and both are in use at the same time, for at least some period of time. It is because of the time it takes to complete XID/PDCP negotiation that the invention is needed. If the negotiation were instantaneous, then there would be no need for the invention. For this reason alone, applicant respectfully submits that the

teachings of Suumäki are irrelevant to the invention as in claims 1 and 5. Nevertheless, applicant provides herewith a further response to the rejections set out in the Office action.

In rejecting claims 1 and 5, the Office relies on Fig. 9 of Suumäki where the receiver starts a negotiation timer, and col. 6, lines 14-17, for a teaching of a "UE device setting a timer." The Office then relies on Fig. 7 showing a "change indicator C-bit" in the XID/PDCP negotiation request, and also col. 5, lines 20-21, and 47-50, and col. 6, lines 1-6, for teaching "in response to an indication from the network of a change from the old SAPI to the new SAPI."

Suumäki discloses an originator (which could be either a mobile or an element on the network side) of an XID/PDCP negotiation sending a request for XID/PCDP parameters and sets a "retransmission timer" in a step 404 (col. 6, line 7), and also discloses a receiver of the request setting a "negotiation timer" in a step 506 (col. 6, line 15) after replying with the requested negotiated parameters. The "negotiation timer" is the timer the Office relies on for rejecting claims 1 and 5. Notice that the negotiation timer is set not when the receiver of the request receives the request for parameters, but instead when it responds. So it is the responding to the request that triggers setting the negotiation timer, not the receiving of the request. Also, as explained at col. 5, lines 47-50, the C-bit is used to indicate that newly negotiated/ renegotiated XID/PDCP parameters are to take effect. The C-bit is therefore communicated (with a new value) after the XID/PDCP negotiation is completed. A changed C-bit therefore does not trigger setting a timer. It signals the conclusion of the XID/PDCP negotiation. There is no further need for any kind of a timer.

Applicant thus respectfully submits that Suumäki does not teach the setting of a timer limitation of claims 1 and 5 because the timer disclosed in Suumäki is not set by a UE for a period of

time in response to--i.e. triggered by receiving--an indication from a network of a change from an old SAPI to a new SAPI, as required by claims 1 and 5. In asserting that the negotiation timer and C-bit of Suumäki teach the limitation of setting a timer as in claims 1 and 5, the Office is interpreting the single limitation, "[a] user equipment device, in response to an indication from the network of a change from the old service access point identifier to the new service access point identifier, setting a timer for a period of time," as two independent and distinct limitations, namely, a UE setting a timer, and a UE receiving an indication of from the network of a change from an old SAPI to a new SAPI. Applicant respectfully submits that such an interpretation is not fair and reasonable, nor is it according to any canon of statutory construction or claim construction.

Further, the C-bit of Suumäki is not relevant even if the partitioning of the single limitation into two independent and distinct limitations were fair and reasonable. The C-bit indicates of Suumäki that new XID/PDCP parameters on an existing SAPI connection are to take effect, not that a change from one SAPI connection to another is to take effect. Thus, even the segmented limitation "in response to an indication from the network of a change from the old SAPI to the new SAPI" is not taught by Suumäki.

Claims 8 and 9

Both claims 8 and 9 recite a network continuing to provide messages for an old SAPI after providing to a UE device a request to change to a new SAPI and also providing the messages for the new SAPI, i.e. the same messages as for the old SAPI. The Office action cites Suumäki at col. 6, ll. 27-38, and col. 9, ll. 19-23, and refers to Fig. 8 for such disclosure. Thus, according to

claims 8 and 9, there is communication of the same messages over both the old SAPI and the new SAPI for a period of time.

As in arguing claims 1 and 5, applicant respectfully submits that the teachings of Suumäki are not relevant in case of changing from an old SAPI to a new SAPI, since Suumäki is directed to XID/PDCP renegotiation, which is different and distinct from a change from an old SAPI to a new SAPI. In particular, as noted above, the invention aims at solving the problem of changing an existing connection to a new SAPI because of the time needed for XID/PDCP negotiation over the new SAPI (in order to determine parameters to use for the new SAPI). For this reason alone, like for claims 1 and 5, the teachings of Suumäki are argued here as irrelevant to the invention as in claims 8 and 9. Nevertheless, applicant provides herewith a further response to the rejections set out in the Office action.

In the reference to col. 9, ll. 19-23 (claim 8), the Office relies on Suumäki for disclosing (from claim 6) a receiver using old parameters for (receiving) incoming packets without a modified change indicator and using new parameters for (receiving) incoming packets with a modified change indicator until a negotiation timer expires. This is not the same as *providing the same* messages on both an old SAPI and a new SAPI, as in (amended) claims 8 and 9, even assuming *arguendo*, that the old packets of Suumäki are transmitted on an old SAPI and the new packets of Suumäki are transmitted on a new SAPI. Note in particular that in referenced Fig. 8, Suumäki discloses only which parameters (new or old) to use in *receiving a packet*; Suumäki does not disclose there using both the new and old parameters. Suumäki discloses always sending new packets after a response is received using only the new parameters. The description at col. 6, ll. 27-38, confirms this interpretation of Fig. 8. So even assuming *arguendo* that a communication on a given SAPI using old XID/PDCP parameters and then new such parameters is the same or in any way analogous to a

change from an old SAPI to a new SAPI, Suumäki nowhere ever discloses communicating using both old and new parameters for the same packets at the same time, as would be required by claims 8 and 9 (if the analogy of XID/PDCP negotiation to change in SAPI were sensible). The Office specifically refers to Fig. 8, col. 6, lines 35-38 and col. 9, lines 19-23, for a teaching of "[the network] also provides the messages for the new service access point identifier" as required by claims 8 and 9. The cited location col. 6, lines 35-38, teaches the receiver of a request for (new) XID/PDCP parameters sending only packets using the new parameters (i.e. those with a modified change indicator) after the receiver sends a response to the request for new parameters (i.e. provides to the originator the new parameters). It teaches sending packets using only the old parameters before sending the response. It also teaches the originator sending only packets per the new parameters after receiving the response from the receiver. Finally, it teaches the originator holding or discarding all packets per the new parameters until the renegotiation timer expires or the response is received, and discarding all packets per the old parameters thereafter. Nowhere does Suumäki teach communicating the same packets using both the old and new parameters. The reference to col. 9, lines 19-23 (i.e. claim 8 of Suumäki) apparently teaches merely that since the receiver, which provided its new parameters to the originator, knows both the new and old parameters, it can use whichever is indicated by the C-bit for an incoming bit. This is not at all the same as indicating sending the same packets on two different SAPIs.

Accordingly, applicant respectfully requests that the rejections under 35 USC §103 of claims 1, 5, 8 and 9 be reconsidered and withdrawn, and that the rejections of the other claims under 35 USC §103 also be reconsidered and withdrawn in view of their dependencies.

New Claims

Each of the new claims corresponds to a previously presented claim, in that each new claim recites limitations corresponding to respective limitations in a previously presented claim. New claims 13 and 14 correspond to claims 11 and 12, as do new claims 19 and 20. New claims 15, 16 and 22 are the network equivalent of claim 11. New claims 17 and 21 correspond to claims 5 and 9. Thus, the new claims are believed patentable over the applied art for the reasons given above.

Conclusion

For all the foregoing reasons it is believed that all of the claims of the application are now in condition for allowance, and their passage to issue is earnestly solicited.

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Date

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